

Claims:-

1. A peptide which inhibits TCR function, wherein the peptide is of the following formula:-

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R1-A-B-A-R2 in which

A is a hydrophobic amino acid or a hydrophobic peptide sequence comprising between 2 and 10 amino acids

B is a charged amino acid

R1 is NH₂ and

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R2 is COOH

2. A peptide according to claim 1 wherein the hydrophobic peptide sequence comprises from 2 to 6 amino acids.

3. A peptide according to claim 1 or claim 2 wherein at least 50% of the amino acids which make up the hydrophobic peptide sequence are hydrophobic amino acids.

4. A peptide according to any one of claims 1 to 3 wherein B is selected from Arg and Lys.

5. A peptide according to any one of claims 1 to 4 which has the formula

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NH₂-Ile-Leu-Leu-Leu-Lys-Val-Ala-Gly-Phe-OH, (SEQ ID NO. 6)

NH₂ Ile-Leu-Leu-Leu-Lys-Val-Ala-Gly-OH, (SEQ ID NO. 7)

NH₂-Leu-Arg-Ile-Leu-Leu-Leu-Gly-Val-OH, (SEQ ID NO. 8)

NH₂-Leu-Gly-Ile-Leu-Leu-Leu-Lys-Val-OH, (SEQ ID NO. 9)

NH₂ - Ile-Leu-Leu-Gly-Lys-Ala-Thr-Leu-Tyr-OH, (SEQ ID NO. 10)

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NH₂-Met-Gly-Leu-Arg-Ile-Leu-Leu-Leu-OH, (SEQ ID NO. 11)

NH₂-Leu-Leu-Met-Thr-Leu-Arg-Leu-Trp-Ser-Ser-COOH, (SEQ ID NO. 12)

6. A peptide according to any one of claims 1 to 3 wherein B is selected from aspartic acid and glutamic acid.

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7. A peptide according to claim 6 wherein the peptide has the formula
 C NH₂-Ile-Ile-Val-Thr-Asp-Val-Ile-Ala-Thr-Leu-OH, (SEQ ID NO. 13)
 A NH₂-Ile-Val-Ile-Val-Asp-Ile-Cys-Ile-Thr-OH, or (SEQ ID NO. 14)
 C NH₂-Phe-Leu-Phe-Ala-Glu-Ile-Val-Ser-Ile-OH. (SEQ ID NO. 15)

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- Sub B3 8. A peptide which inhibits TCR function, wherein the peptide is derived from the TCR- α intracellular chain and comprises the formula:
 NH₂-Ala-Gly-Phe-Asn-Leu-Leu-Met-Thr-COOH.

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9. A peptide which inhibits TCR function, wherein the peptide is of the following formula:-

R1-A-B-C-R2 in which

A is a peptide sequence of between 0 and 5 amino acids;

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B is cysteine;

C is a peptide sequence of between 2 to 10 amino acids;

R1 is NH₂; and

R2 is COOH.

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10. A peptide according to claim 9 wherein A is a peptide sequence comprising 5 amino acids.

11. A peptide according to claim 9 or claim 10 wherein C is a peptide sequence of 4 or 5 amino acids and includes at least one hydrophobic amino acid.

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- Sub B4 12. A peptide according to any one of claims 9 to 11 wherein the peptide has the formula:

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A NH₂-Tyr-Gly-Arg-Ala-Asp-Cys-Gly-Ile-Thr-Ser-OH, or (SEQ ID NO. 17)

A NH₂-Trp-Gly-Arg-Ala-Asp-Cys-Gly-Ile-Thr-Ser-OH, or (SEQ ID NO. 18)

A NH₂-Tyr-Gly-Arg-Ala-Asp-Cys-Ile-Thr-Ser-OH, or (SEQ ID NO. 19)

A NH₂-Ser-Ser-Asp-Val-Pro-Cys-Asp-Ala-Thr-Leu-Thr-OH. (SEQ ID NO. 20)

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13. A therapeutic composition comprising a peptide as claimed in any one of claims 1 to 12 and a pharmaceutically acceptable carrier.

14. A method of treating a subject suffering from a disorder in which T-cells are involved or recruited, the method including administering to the subject a therapeutically effective amount of the composition as claimed in claim 11.

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15. A method of delivering a chemical moiety to a cell, the method including exposing the cell to the chemical moiety conjugated to a peptide according to any one of claims 1 to 12.

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